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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,205	05/25/2001	Shea Chen	004578.1123	4344

7590

01/24/2003

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EXAMINER

LUEBKE, RENEE S

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 01/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/866,205

Applicant(s)

CHEN & PILLANS & EHMKE & YAO

Examiner

Renee S. Luebke

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 22-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-9, 11-19 and 21 is/are rejected.
- 7) ☐ Claim(s) 10 and 20 is/are objected to.
- 8) ☐ Claim(s) 22-24 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 25 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 & 4
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. Restriction to one of the following inventions was required under 35 U.S.C. 121:

- I. Claims 1-14, drawn to a switch, classified in class 200, subclass 512.
- II. Claims 15-24, drawn to a method of switching and manufacturing, classified in class 29, subclass 622.

2. The inventions are distinct, each from the other because:

Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process as claimed could be applied to several different applications such as computer keyboard or to traffic signal controls.

3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

4. During a telephone conversation between Mr. T. Murray Smith, applicant's attorney, and examiner Alvin Grant, on December 6 2002, a provisional election was made with traverse to prosecute the invention of Group I. Affirmation of this election must be made by applicant in replying to this Office action. Group II is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. In examining this application on the merits, the present examiner has concluded that claims 15-21 involve the method of use of the structure of claims 1-14. Here, the method of use involves the specifically claimed

Art Unit: 2833

structure and cannot be separated from the structure claims. Therefore, despite the statements above, claims 1-21 have been examined on the merits. Claims 22-24 are seen to be drawn to the method of manufacture and are withdrawn.

6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4, 6-9, 11-16, 18, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's prior art discussed on page 1 of the present application in view of Randall, et al. The prior art discloses the claimed apparatus including the base section, conductive part and a membrane, but lacks a resilient structure. However, the similar apparatus of Randall includes a resilient structure 36 to "reduce the required pull down voltage" and it also "reduces the stress and fatigue in the membrane due to switch activation." As these advantages convey a longer life to the device, it would have been obvious to include a resilient, flexure structure on the acknowledged prior art for the purposes taught by Randall. In regard to claim 9, the upward direction of the first and second membranes is seen to have been an obvious reversal of parts. In regard to claim 12, the use of two U-shaped

profile sections in each expansion section is seen to have been an obvious duplication of parts. In regard to claim 15, the acknowledged prior art is operated by responding to an applied voltage as claimed and, as noted above, provision of a resilient structure is taught by Randall.

9. Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's prior art and Randall, as applied to claims 1, 3 and 4 above, and further in view of Walser, et al. As noted above, the shape of the profile of the resilient structure is seen to have been an obvious matter of design choice. One of the available choices, as shown by Walser, is a sine wave. Such a shape reduces fatigue at the corners. For that reason, it would have been an obvious shape for a resilient structure on the membrane of the prior art.

10. Claims 10 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to show or teach a device of this type where the membrane sections engage the base section prior to the conductive part.

11. **Any response to this action may be mailed to:**

Assistant Commissioner for Patents
Washington, DC 20231

or faxed to:

(703) 872-9318 or 308-7722 or 308-7724
(informal or draft communications should be clearly labeled
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

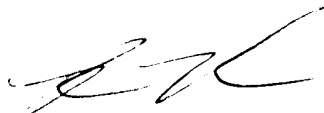
Crystal Plaza 4, Fourth Floor (Receptionist)
2201 South Clark Place, Arlington, Virginia.

Application Number: 09/866,205
Art Unit: 2833

Page 5

12. Any inquiry concerning this communication from the examiner should be directed to Mrs. Renee Luebke whose telephone number is (703) 308-1511.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mrs. Paula Bradley, can be reached at (703) 308-2319.



Renee S. Luebke
Primary Patent Examiner
January 22, 2003